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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/585,262

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Reiji Miyahara

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EXAMINER

METZMAIER, DANIEL S

ART UNIT

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1796

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/585,262	MIYAHARA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Daniel S. Metzmaier	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6,9-16 and 19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6,9-16 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Claims 1-6, 9-16 and 19 are pending.

#### ***Information Disclosure Statement***

1. The information disclosure statement filed 03 February 2010 fails to comply with 37 CFR 1.98(a)(1), which requires the following: (1) a list of all patents, publications, applications, or other information submitted for consideration by the Office; (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the application number of the application in which the information disclosure statement is being submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the examiner's initials; and (5) a heading that clearly indicates that the list is an information disclosure statement. The information disclosure statement has been placed in the application file, but the information referred to therein has not been considered.

The Transmittal letter states: "In accordance with Rule 56, applicant is aware of the publications listed in the enclosed copy of Patent Office Form PTO/SB/08a." The examiner is unable to find the "Form PTO/SB/08a" referenced by applicants.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 6, 9-10 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6 and 16 are indefinite because they lack proper antecedent basis for “the water-miscible solvent”. Applicants' last amendment removed this from the independent claims.

Claims 9 and 10 refer to “compound” in lines 9 and 8, respectively. It is unclear if this is intended to be a reference to said “polypropylene glycol/polyethylene glycol copolymer compound or its dimethyl ether compound” in the claims or some other compound.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2, 6, 10 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Narayanan et al, US 6,251,416. Narayanan et al (abstract, TABLE 1, examples and TABLES 4 and 5) discloses clear, one phase, microemulsions and ultrafine emulsion having an average droplet size of less than 500 nm (see instant claim 10). Said average droplet size of less than 500 nm would have been inherent to the clear, one phase, microemulsions and ultrafine emulsions. Narayanan et al (columns 5-8, tables 4 and 5) disclose microemulsions formulated with 10 % by mass water insoluble and hydrophobic insecticides employing nonionic surfactants including a lipophilic nonionic surfactant, Pluronic® L31 (EO/PO block copolymer, HLB ~ 4.5), and a hydrophilic nonionic surfactant, Alkamuls® EL-620 (ethoxylated -30-castor oil,

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HLB~12), among others. The clear, one phase, microemulsions and ultrafine emulsions further employ N-methylpyrrolidone, which a water miscible solvent.

The Pluronic® L31 is both a polypropylene glycol/polyethylene glycol copolymer compound (D) and a lipophilic nonionic surfactant (B), *i.e.*, HLB ~ 4.5. The emulsions were tested (column 5, lines 65-67) at high temperature. Applicants state that clear, one phase, microemulsions and ultrafine emulsions may be differentiated: “. . . by increasing the temperature once to a high temperature and then cooling to the original temperature. If the state returns to the original state, it is a ‘one-phase microemulsion’ (thermodynamically stable). If the state does not return to the original state, it is an ‘ultrafine emulsion’ (thermodynamically unstable).” Narayanan et al (examples) exemplifies variations of degrees between clear, one-phase microemulsions, hazy emulsions, and two-phase emulsions. The Narayanan et al clearly anticipates both clear, one phase, microemulsions and ultrafine emulsions as claimed. Furthermore, the claimed CMC property of the hydrophilic nonionic surfactant would have been inherent to the Alkamuls® EL-620 (ethoxylated -30-castor oil, HLB~12) regarding the polypropylene glycol/polyethylene glycol copolymer compound (D), Pluronic® L31 (EO/PO block copolymer, HLB ~ 4.5) employed in the Narayanan et al reference.

6. Claims 1-2, 6, 10 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Menarini Ricerche SPA, WO 03051375 A1. Menarini Ricerche SPA (abstract and examples 1-6) discloses microemulsions and/or ultrafine emulsion employing nonionic surfactants including a lipophilic nonionic surfactant, poloxamer 101

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(EO/PO block copolymer, HLB ~ 4.5), and a hydrophilic nonionic surfactant, polysorbate 85 (ethoxylated sorbitan ester, HLB~11). The isopropyl myristate is an oil.

The poloxamer 101 is both a polypropylene glycol/polyethylene glycol copolymer compound (D) and a lipophilic nonionic surfactant (B), *i.e.*, HLB ~ 4.5. the claimed CMC property of the hydrophilic nonionic surfactant would have been inherent to the polysorbate 85 (ethoxylated sorbitan ester, HLB~11) regarding the polypropylene glycol/polyethylene glycol copolymer compound (D), poloxamer 101 (EO/PO block copolymer, HLB ~ 4.5) employed in the Menarini Ricerche SPA reference. Water is a water miscible solvent. Water is clearly miscible in itself. The remaining properties of the claim would have been expected to have been inherent as the materials are otherwise anticipated. A compound and all of its properties are generally inseparable. *In re Papsech*, 315 F2d. 381, 137 USPQ 43, (CCPA 1963).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-6, 9-10 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peffly et al, US 6,149,898, in view of Dow Corning Corp, EP 0 459 500 A2 (hereafter Dow). Peffly et al discloses silicone-in-water microemulsions for hair care compositions.

Peffly et al differs from claims in the incorporation of the polypropylene glycol/polyethylene glycol copolymer compound (D) in the exemplified compositions and the exemplified concentration of 10-40 % by mass oil.

Peffly et al (column 8, lines 9-11) specifically mentions polypropylene glycol/polyethylene glycol copolymers available under the PLURONIC® trademark may be employed in the microemulsion compositions as conventional nonionic surfactants. Peffly et al (column 8, lines 21-33) disclose the use of mixed surfactant combinations including mixed nonionic surfactants and/or combinations of nonionic surfactants and anionic surfactants. Peffly et al (column 6, lines 31-41) discloses patentees compositions may employ up to about 10 wt% of the dispersed polysiloxane and (column 6, lines 42-60) have a particle size on the order of 80 nm, 60 nm, or 40 nm.

Peffly et al (column 18, lines 5 et seq) discloses the addition of silicone polyethers, which would have been expected to have been a lipophilic surfactants having specific application to the polysiloxane emulsions. Peffly et al (column 6, lines

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51-63) discloses the silicone polyethers may be present as emulsifiers in making the polysiloxane emulsions or may be added at a later time in the processing.

Dow (page 1, lines 18-21) discloses making polysiloxane microemulsions and fine emulsions as the preferred form of the emulsions. Dow (page 4, lines 9-13) disclose emulsions having 10 to 70 wt % silicone component. Dow (page 5, lines 10-27) teaches a total HLB of between 10 and 20 for said microemulsions. Dow (page 5, lines 11-15) teaches mixtures of low HLB nonionic surfactants (*i.e.*,  $HLB < 10$ ) may be employed provided said surfactants are employed with a high HLB nonionic surfactants (*i.e.*,  $HLB > 10$ ).

These references are combinable because the Peffly et al reference (column 7, lines 21 et seq) cites and incorporates by reference the Dow reference for methods of making the microemulsions. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ the polypropylene glycol/polyethylene glycol copolymers available under the PLURONIC® trademark contemplated in the Peffly et al reference and known to ordinary skilled artisan for their advantageous nonionic surfactant.

It would furthermore have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ 10 wt % of polysiloxane as clearly contemplated and taught in the Peffly et al reference.

9. Claims 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peffly et al, US 6,149,898, in view of Dow Corning Corp, EP 0 459 500 A2 (hereafter



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Dow), as applied to claims 1-6, 9-10 and 19 above, and further in view of Takasago International Corporation, WO 2004/024114 A2.

Peffly et al in view of Dow further differ from claims 11-16 in the PIT method of making the exemplified microemulsions.

Takasago International Corporation (abstract and examples) disclose silicone-in water hair care compositions that are (paragraph bridging pages 9 and 10) preferably microemulsions having a particle size of less than 0.5 microns (*i.e.*, 500 nm). Takasago International Corporation (page 5, line 2) disclose making emulsions by emulsion polymerization employing methods similar to those of Dow. Takasago International Corporation (example 1, page 24, lines 10 et seq) disclose emulsions made by phase inversion.

These references are combinable because they teach hair care compositions as silicone in water microemulsions for hair care compositions. It would have been obvious to one of ordinary skill in the art at the time of applicants' invention to employ the phase inversion method of Takasago International Corporation as a conventional method in making silicone-in-water microemulsions for hair care compositions.

### ***Response to Arguments***

10. Applicant's arguments with respect to claims 1-6, 9-16 and 19 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David W. Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/Daniel S. Metzmaier/  
Primary Examiner, Art Unit 1796**

DSM